REMARKS/ARGUMENTS

The above-captioned patent application has been carefully reviewed in light of the Office Action to which the Amendment is responsive.

Claims 1, 8, 10, 12, 13, and 17-22 have been amended by deleting reference to the "collet one-piece within the contact" and changed references in dependent claims from "collet" to "contact." The collet one-piece is simply part of the "contact" element referenced immediately preceding. This amendment is made voluntarily and not in response to any prior art rejection and is for the purpose of clarifying that the collet one-piece is part of the contact and not a distinct element in addition to the contact. Furthermore, this amendment is not narrowing the scope of the claims.

Claims 1 and 20-22 have been amended to remove the word "permanently" from the preamble and the language that the cable is "not removable" from the device when the compression body is in the second position. It is well known by people skilled in the art of coaxial cable connectors that industry standard destructive testing, such as tensile pull strength tests, is performed on connectors as part of customer certification and/or approval prior to use in cable television systems. The most common point of failure of tensile pull strength testing is separation of the cable from the connector. The initial use of the removed language was intended to convey that the subject invention would be retained on a properly prepared and sized cable and that it greatly surpasses industry standards for tensile pull strength or cable retention testing. The use was not intended to suggest that it was not possible to separate the connector from the cable under destructive testing conditions and tensile stresses far exceeding industry standards. This amendment is also made voluntarily, not in response to any prior art rejection and is for the purpose of clarifying but not narrowing the scope of the claims.

Claims 1 and 20-22 have been further amended to remove unnecessary limitations in the description of the mandrel. This amendment is also made voluntarily, not in response to any prior art rejection and is for the purpose of broadening the scope of the claims with respect to the mandrel.

Claims 1 and 20-22 have been further amended to clarify that the axial motion is a "sliding" axial motion as opposed to the threaded advancement taught in the cited prior art. Additionally, claims 1 and 21 have been amended to clarify the "continuous" nature of the sealing relation between the sealing member and the outer conductor when the compression body has been axially slid forward into the second position. As the sliding axial movement of the compression body is supported at the bottom of page three of the application, and the continuous nature of the seal is disclosed at the bottom of page four of the application, no new matter has been added and the claims are in condition for allowance. Based on the arguments set forth below, the rejections of claims 1-4, 8-15 and 20-22 are respectfully traversed.

Claims 1-22 are pending. Claims 1-4, 8, 10-12, 14, 15 and 20 have been rejected based on Atkins (U.S. Patent No. 3,184,706) under 35 USC §102(b), and Claims 9 and 13 have been rejected under 35 USC §103(a) based in part on the Atkins reference. Claims 21 and 22 have been rejected based on Szegda (U.S. Patent No. 4,676,577) under 35 USC §102(b). Reconsideration is respectfully requested based on the amended claims and the following discussion.

In order to anticipate under the Statute, each and every essentially claimed limitation must be found in the single cited reference. Those limitations that are not found must be notoriously well known to one of sufficient skill in the field.

In order to raise a "prima facie" obviousness rejection, each and every claimed limitation must also be present in the cited art, either singly or in combination, at the time of the invention to one of sufficient (e.g., ordinary) skill in the field of the invention. Those features that are not found or suggested must be very well known to those of ordinary skill in the field.

The present inventive device for interconnecting a hard-line coaxial cable to a housing comprises a connector body with a central longitudinal axis and a contact interconnected to and extending coaxially through the connector body including a collet one-piece for receiving the central conductor of a coaxial cable. The device further includes a compression body positioned radially adjacent to a portion of the connector body for sliding axial movement relative thereto between a first position, wherein the coaxial cable is removable from within the device, and a second position, wherein the coaxial cable is not removable from within the device. A mandrel and a sealing member are housed within the connector body. According to the invention, when a prepared cable is inserted into the connector and the compression body is axially advanced to the second position, the mandrel contacts the inner surface of the outer conductor of the coaxial cable and the sealing member, in engaged relation to said compression body, is positioned in sealing relation to an outer surface of the outer conductor.

Turning to the prior art, Atkins (U.S. Patent No. 3,184,706) discloses a typical coaxial cable connector of the threaded type as discussed on page 2 of the application as opposed to the sliding axial compression-style connector of the present invention. As the tubular nut 132 is threadedly advanced, it radially constricts the jacket clamp 110 which has both a longitudinal split 112 and a plurality of rearwardly opening longitudinal slots (see column 5, lines 15-19). A gripping thread 116 on the inner surface of the clamp grips the cable jacket. As the nut 132 is further screwed into the connector body, it causes the cam sleeve 98 to cam the crimping ferrule 84 radially inwardly against the crimping ring 82 (see column 6, lines 12-19). The crimping ferrule 84 also has both a longitudinal split 86 extending therethrough and a plurality of rearwardly opening longitudinal slots 88 extending along most of the length of the ferrule (see column 4, lines 26-36). The constriction of the crimping ferrule over the crimping ring provides an electrical connection between the braid of the cable and the outer contact of the connector 42.

Similarly, Szegda (U.S. Patent No. 4,676,577) discloses an improved threaded-type hard-line coaxial cable connector that reduces the number of separate parts and is therefore easier to handle in the field. As the cap assembly 16 is screwed onto the body assembly 14, the outer conductor clamp 46 abuts the mandrel 32. The outer conductor clamp 46 includes a longitudinal slot 76 that runs the entire length of the clamp 46. As the cap is threadedly advanced, the cooperating ramps of the front body 24 and the outer conductor clamp 46 constricts the clamp and seizes the outer conductor between the clamp 46 and the mandrel 32.

Both Atkins and Szegda are connectors of the threaded-type, disclosed at page two of the application, which are distinguished from the compression-type connectors of the present invention. Claims 1 and 20-22 have been amended to clarify that the axial movement is a "sliding" axial movement and therefore overcomes the rejection based on the cited prior art.

Additionally, the full length splits and plurality of longitudinal slots of the ferrule of Atkins and the clamp of Szegda prevent the formation of a 360° seal with the outer conductor of the cable as required by the pending claims. Thus, neither the slotted crimping ferrule 84 of Atkins nor the slotted outer conductor clamp 46 of Szegda constitute a "sealing member" positioned in "sealing relation" as required by the claims. Therefore, the cited prior art fails to teach or suggest, among other things, "a sealing member housed within said connector body and in engaged relation to said compression body, said sealing member being positioned in sealing relation to an outwardly facing surface of said outer conductor when said compression body is in its second position." In order to clarify the nature of the sealing relation of the sealing member and the outer surface of the outer conductor, claims 1 and 20-22 have been amended to require a "continuous" sealing relation as distinguished from the discontinuous clamping of the cited prior art.

Consequently, it is believed the presently claimed device having the combination of stated Claim 1 cannot be anticipated or rendered obvious by this cited art for failing to include or suggest these essential claimed features.

Claims 2-4 and 8-15, which depend from Claim 1, are believed allowable for the same reasons.

Claim 20 has been rejected based on Atkins under 102(b). As noted above, Claim 20 has been amended to clarify that the axial movement of the compression body is a "sliding" axial movement which is fundamentally different than the threaded advancement of the cited prior art. Therefore, with this amendment, Claim 20 is now in condition for allowance.

Claim 21 has been rejected based on Szegda under 102(b). As noted above, outer conductor clamp 46 of Szegda has a longitudinal slot along its entire length which prevents the formation of a 360° seal with the outer conductor of the cable as required by the Claim 21. Thus, the slotted outer conductor clamp 46 of Szegda cannot constitute a "sealing member" positioned in "sealing relation" as required by the claim. Claim 21 has now been amended to require a "continuous sealing relation" that is distinguished from the discontinuities caused by longitudinal splits and axial slots taught by the cited prior art. Therefore, with this amendment, Claim 21 is now in condition for allowance.

Claim 22 has been rejected based on Szegda under 102(b). As noted above, Claim 22 has been amended to clarify that the axial movement of the compression body is a "sliding" axial movement which is fundamentally different than the threaded advancement of the cited prior art. Therefore, with this amendment, Claim 22 is now in condition for allowance.

In summary, it is believed that the above-captioned patent application, as amended, is now in an allowable condition and such allowance is earnestly solicited.

If the Examiner wishes to expedite disposition of the above-captioned patent application, he is invited to contact Applicant's representative at the telephone number below.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-0289.

Respectfully submitted,
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